

AVICULTURAL MAGAZINE



*VOLUME 114
No. 3
2008*

THE AVICULTURAL SOCIETY

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THE HON. SECRETARY AND TREASURER, THE AVICULTURAL SOCIETY, ARCADIA, THE MOUNTS, TOTNES, DEVON TQ9 7QJ, UK.

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AVICULTURAL MAGAZINE

THE JOURNAL OF THE AVICULTURAL SOCIETY

Vol. 114 - No. 3 All rights reserved ISSN 0005 2256

2008

A VISIT TO CIKANANGA WILD ANIMAL RESCUE CENTRE, JAVA, INDONESIA

by Andrew Owen

Following the kind invitation from David Jeggo, Chair of the EAZA Passerine TAG Group (European Association of Zoos and Aquaria Passerine Taxon Advisory Group) and Roland Wirth, Director of ZGAP (Zoological Society for the Conservation of Species and Populations), based in Munich, Germany, I spent three weeks in February 2008 at the Cikananga Wild Animal Rescue Centre on the Indonesian island of Java. I was asked to visit the centre to assist with the establishment of protocols for a captive-breeding programme for the Black-and-white Laughingthrush *Garrulax bicolor*, a rare species of passerine endemic to the neighbouring island of Sumatra.

In the previous issue of the magazine (Vol.114, No.2, pp.70-78 (2008)) I described the first breeding in the UK of the Black-and-white Laughingthrush, at Waddesdon Manor aviaries, near Aylesbury, Buckinghamshire. It is one of only two collections known to have bred this species, the other being Paultons Park in Hampshire. There is only a very small population of this species in European collections and there is extreme concern for it in the wild, due to the capture of wild birds for the cage bird trade.

In addition to working at Cikananga with the laughingthrushes, I assisted Resit Sozer, Cikananga's Director and Pavel Hospardarsky, an experienced aviculturist from the Czech Republic, based in the Philippines, who was establishing a captive breeding group of Black-winged Starlings *Sturnus melanopterus*, an Endangered species from Java, Bali and Lombok.

Cikananga, in the west of Java, is the largest animal rescue centre in Indonesia and is dedicated to the conservation of Indonesian wildlife, facilitating the enforcement of wildlife laws, by playing a key role in the confiscation, rehabilitation and release of wild animals. Many species of confiscated animals, including primates, Sun Bears *Helarctos malayanus*, Leopards *Panthera pardus*, Tigers *P. tigris* and a wide variety of birds, are kept at the centre. The recent focus, however, has been on the establishment of captive breeding programmes for a number of highly threatened

Indonesian species, primarily the Black-winged Starling, Black-and-white Laughingthrush and Javan Warty Pig *Sus verrucosus*, with the eventual aim of releasing captive-bred stock into suitable protected wild areas.

I worked closely with Pavel, Resit and the bird keeping staff. Guidelines were drawn up for the care and management of the birds, with special attention given to aviary management, diet and breeding requirements. There are a large number of very good aviaries at the centre, and a large part of our time was spent modifying these to suit the needs of breeding birds. Several aviaries, particularly those that were designated for the laughingthrushes, which are generally rather secretive and require thick vegetation in which to nest, are heavily planted with shrubs and small trees, collected from around the grounds.

The founding stock for the breeding programmes consisted of five Black-and-white Laughingthrushes and nine Black-winged Starlings. A further 12 starlings were acquired during my time there and, hopefully, additional laughingthrushes will be added to the programme soon. Two pairs of Spectacled Laughingthrushes *Rhinocichla mitrata* have also been established at the centre. Although this Sumatran (Malaysian) species is not considered threatened, it was thought that these birds could be useful as a model species to provide the aviary keepers with valuable experience with another species of laughingthrush with which to perfect their husbandry and captive breeding skills. These skills can then be applied to the management of *G. bicolor*.

Pavel and I spent a lot of time closely observing the birds' behaviour, in an attempt to pick out potential breeding pairs. Once the aviaries were prepared the birds were measured, weighed and, if necessary, ringed (banded) and, in the case of the laughingthrushes, feathers were removed for DNA sexing at a UK laboratory when I returned home.

Resit, Pavel and I flew to central Java, to the district of Klaten, near Yogyakarta, to observe the work of a group of bird keepers who have set up a consortium with the aim of breeding passerines for the cage bird market. Approximately 60 people from several villages in the district have formed a cage bird breeding society and there are an additional 60 or so others who breed birds, but are not members of the society. The skills they have acquired and the techniques they use produce astonishing numbers of passerines, on a scale that must be unique anywhere in the world.

The breeders focus on the most popular species, normally those that have a melodic song or make good pets. Some breeders specialise in just one species, while others produce several. Altogether about 10 or so species are bred, with the most popular being the Asian Pied Starling *S. contra*, Magpie Robin *Copsychus saularis*, White-rumped Shama *C. malabaricus*,

Black-winged Starling, Chestnut-capped Thrush *Zoothera interpres* and Straw-headed Bulbul *Pycnonotus zeylanicus*.

The society appears to be very well organised. Everyone uses exactly the same technique to rear each particular species of bird. They all have the same size aviaries, use the same food, provide identical nest boxes and baskets and use the same nest material. The eggs are removed from the nest a day or two before they are due to hatch or the chicks are removed soon after hatching and the young are hand-reared. As these birds are reared purely for commercial reasons, it is important to them to rear as many as possible from each pair and, by hand-rearing the chicks, the breeding pairs produce several clutches each season. Another reason for removing the chicks for hand-rearing, appears to be because chicks left in the nest are often predated by ants.

All of the young are fitted with closed rings (bands), unique to the year and the breeder. All are hand-reared on a similar diet, consisting of finely ground chicken broiler crumble and, Kroto, a mixture of the larvae and eggs of the local weaver ants. This food is available in the numerous bird shops, however, many breeders culture their own ants in mango trees in their gardens.

An amazing number of birds are reared. One breeder produces 25 Asian Pied Starlings a week for the market and another rears 30 Magpie Robin chicks per pair per year. I would be amazed if that many Magpie Robins were bred in the whole of the UK in a year, let alone by one breeder from one pair!

Because they are producing these birds purely for commercial reasons, they obviously push their birds hard to obtain the highest number of young. In my opinion their aviaries are probably a little too small and the diet they feed their birds is extremely basic - chicken crumbs, crickets and the occasional bit of fruit for the fruit-eaters - but the skill and dedication of these aviculturists is extremely impressive.

It is also interesting to note that many of these breeders were formerly bird trappers or bird hunters. Now they are making a good living supplying the market with large numbers of captive-bred birds, that are more popular than the wild-caught ones, so there is a real conservation element to their story too. If people prefer captive-bred birds then, hopefully, it will encourage more people to breed them, rather than take them from the wild.

It was great to share our bird breeding experiences with the breeders of Klaten. Resit, Pavel and I left there with our heads spinning with the knowledge we had gained and with ideas on conservation work these people can possibly help us with in the future. Further captive-bred pairs of Black-winged Starling were acquired for the breeding programme and plans were

made to send at least one of the Cikananga bird keepers to Klaten to learn their hand-rearing techniques.

Cikananga Wild Animal Rescue Centre is a very good facility at which to carry out *in situ* captive breeding programmes and with future support, funding and guidance from overseas zoological collections, these early breeding programmes have every chance of succeeding.

The conservation fund set up at Waddesdon Manor aviaries will assist with initial funding for the captive breeding programme for the Black-and-white Laughingthrush at Cikananga.

Acknowledgements

I would like to thank Waddesdon Manor's Director Fabia Bromovsky and Curator of Birds Ian Hadgkiss for allowing me the opportunity to visit Java and for assisting with the cost of the flight to Indonesia. Thanks also to Roland Wirth and ZGAP for covering half of my travel costs and the Avicultural Society and Geoff Masson at Paultons Park, for donations towards the laughingthrush project. Finally, a big thank you to Resit Sozer, Pavel Hospardarsky and the staff at Cikananga for making my visit such a productive and enjoyable one.

Postscript

On July 21st 2008, Andrew received the following update from Java: "At present 30 Black-winged Starlings are housed at Cikananga Wild Animal Rescue Centre. Seven of these were confiscated over the period 2002-2006 by the Indonesian Government in Jakarta, West Java and Bali, as the species is protected by national law. Thirteen captive-bred birds have been obtained from the village of Klaten in central Java during the past two years, and 10 birds have been successfully reared at Cikananga since February 2008."

Andrew Owen was, until very recently, Senior Aviary Keeper at Waddesdon Manor aviaries, near Aylesbury, Buckinghamshire HP18 OJH, UK. He is now Curator of Birds at Chester Zoo. If you would like to make a donation or learn more about the breeding programmes you can contact him there via E-mail: a.owen@chesterzoo.org

THE EUROPEAN ROBIN *Erithacus rubecula* ITS CARE AND BREEDING IN AVICULTURE

by Peter Karsten

Introduction

In the context of aviculture the European Robin is a softbill. Taxonomically it is grouped with the thrushes in the subfamily Turdidae. It ranges throughout Europe and western Asia and has eight subspecies.

It measures about 7½in (14cm) in length and weighs 12g-20g. The forehead and chest are orange-red and this colour extends to the sides of the neck and below the eyes. The orange chest is partly bordered by a faint bluish-grey band. The back and wings are olive-grey to brown, the belly is whitish, the under tail-coverts are a cream colour and the upper tail-coverts are light brown. Some adults have ochre coloured tips to the greater wing-coverts, which is a prominent feature of the juvenile plumage. Juveniles have spotted plumage until they obtain their adult plumage in the fall (autumn).

The sexes look alike, although some aviculturists feel that there are slight differences, such as the width of the orange band on the forehead, which is considered to extend higher up on the male. In a pair I obtained this was not evident, in fact the female seemed to have a broader band, which misled me until a DNA test determined the bird's gender. By carefully studying the extent of the orange patch of nine birds raised by the same parents, it seemed to me that the orange reached further up under and beyond the eyes of the birds that I had determined to be males. Determination of sex was done by observing the higher levels of aggression and dominance over siblings just prior to separating the young and housing them in individual enclosures to avoid serious conflicts and by dominant behaviour patterns after separation. The perceived males regularly came out into the open to take up observation posts from which they could see other European Robins in neighbouring enclosures. During October-November of their first year, especially if I whistled to them, they would often sing, but the song was barely audible and was detectable by the movement of the throat feathers and less by the vocalisation. The males were braver in approaching me at feeding time. Juvenile females generally stayed back and went to the food after I had turned and left. I could at times entice males to sing by playing taped song of the European Robin. Females did not respond and even retreated. These behavioural observations were made on juveniles during September-November when they were three to four months old. In the spring, the more prominent singing of the males and a protruding nipple-like papilla of the cloaca are a good means of establishing a bird's sex (other

than by a DNA test). Housed in side-by-side aviaries a male and female will by their gender related behaviour also provide clues, as described below.

The European Robin lives in the shrub level of forest, woodland and in cultivated garden environments. It searches on the ground for invertebrates, often by turning over fallen leaves and other ground litter. Besides insects and arthropods, it eats small slugs and snails and segmented worms. Various berries are taken in the fall (autumn) and winter.

It is a highly territorial species and will aggressively defend its feeding grounds and nesting territory against intruders of its own kind and to some extent also against other softbills. This behaviour will inevitably lead to losses if two European Robins are put together in the same aviary, regardless of their sex, unless the birds have established their breeding territory as a pair. From an avicultural perspective this is perhaps the most critical point in caring for this species. Once the birds are paired up they will jointly defend their territory against intruders.

In the wild the nest is built close to the ground or often on the ground, but may also be built in a cavity high in a tree, in a hole in a wall or in a half-open-fronted nest box above 6ft (approx. 2m). The female seeks a location where the nest will be roofed. Nests in tin cans, mailboxes and other man-made objects are not rare. Nesting material includes leaves, grasses, moss and animal hair. Hair is used to line the nest cup.

A clutch normally consists of five to six eggs, which are cream coloured with fine rust-brown spots. The incubation period is 13-14 days and the nestling period is the same. Typically, two clutches are reared per year. The young are reared by both parents. The male does most of the feeding of the fledged chicks if the female starts another nest. In an avicultural setting, it is important that the earlier clutch of chicks are weaned prior to the hatching of the next clutch. This is to ensure that the parents give sufficient attention to the newly-hatched chicks. Adults give priority to the most vigorous and advanced offspring as a form of species survival strategy. If the state of independence of the chicks is in doubt, the male and the chicks can be moved to a separate enclosure, leaving the feeding of the newly-hatched chicks to the female.

Avicultural experience

Acquisition

I obtained two European Robins of undetermined sex from an importer on February 18th 2005. One was in good condition while the other had lost about 20% of its upper mandible, the nail on the left hind toe was missing and the foot joints and toes were swollen. Articular gout was suspected. The bird favoured its right leg. There was no conclusive difference in the coloration of the plumage of the two birds, although the orange colour on the

forehead of the intact bird seemed to extend further. DNA testing proved that this bird was a female and the injured bird was a male. They were housed in side-by-side enclosures separated by ½in (12mm x 12mm) wire mesh.

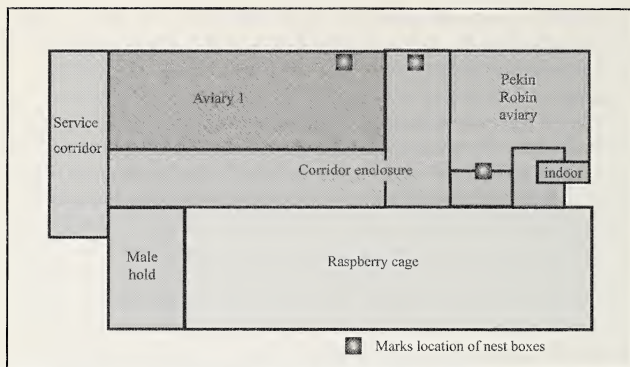
Feeding

European Robins are basically insectivores, that during the fall (autumn) and winter will eat berries in the wild. At bird feeding stations they accept suet or margarine mixed with poppy seeds and finely chopped nuts. I feed them crickets, waxworms, buffalo worms and wild moths, but very few mealworms. The exception being those that have freshly shed their skins, i.e. white-skinned mealworms and pupae which are picked from the cultures whenever possible. Crickets are provided in plastic storage boxes with 10in-11in (25.5cm-28cm) high sides to prevent escapes. Waxworms are also placed in these containers to give the birds enough time to capture them before they crawl out of the containers to find hiding places to pupate. At low ambient temperatures waxworms become lethargic and remain in small food dishes. A home-made softbill mix is offered regularly and some of it is consumed, particularly during the winter months (for recipe see Appendix). I would not depend on the softbill mix as the sole food supply. Earthworms and beetle grubs are given when available. The birds find some of these on the aviary floor where they turn over the ground litter. The literature suggests offering strips of cooked or raw beef heart. I breed and offer my birds a consistent supply of insects (livefood) and have not fed them beef heart. The insects are dusted with vitamin/mineral supplements twice a week and a dish of crushed eggshell is available. During the rearing of the chicks the insects are dusted every second day with Nekton products, Nekton S and Nekton MSA.

European Robins are not swift at picking up food, they typically tilt their heads and look at a food item before they lunge forward and seize it. This needs to be considered if tits *Parus* spp. and/or Pekin Robins *Leiothrix lutea* cohabit with European Robins. Unless there is an ample supply of livefood the other species will easily out compete the latter. Tits and Pekin Robins feed in pairs and groups and intimidate the European Robin, which is a solitary feeder. Providing insects at dusk and dawn helps the crepuscular European Robin to obtain food when the other species are not active.

Housing

The layout of the author's enclosures has evolved through the consecutive construction of the various components (see diagram of layout). Aviary No.1 is 6ft x 12ft x 8ft high (approx. 1.8m x 3.6m x 2.4m high). It was built as a breeding enclosure for Pekin Robins and heavily planted with shrubs, conifers and bamboo. The 'corridor enclosure' is a T-shaped space 4ft wide x 8ft high (approx. 1.2m wide x 2.4m high), used originally as a service



Layout of European Robin breeding facility.

corridor for the connecting aviaries. It has been planted since with conifers and become a habitat-type space. A 6ft x 18ft x 8ft high (approx. 1.8m x 5.4m x 2.4m high) raspberry cage is on the other side of the corridor. The aviaries are mostly covered with glass or plastic (polyethylene sheeting) to control heavy rainfall and contamination by wild bird droppings.

The raspberry cage protects our fruit from being raided by wild birds. The European Robins had access to this cage most of the time. A small flight (for holding the male) is connected by an overhead passage to an indoor aviary not shown on the diagram. The space is used to hold the male during the non-breeding season. All of the spaces connect with the corridor by way of walk-through doors and overhead slides. There is a shift passage from the male's holding enclosure to aviary No.1 to cross over the corridor space. A breeding aviary for Pekin Robins abuts part of one other side of the corridor. I do not suggest building a breeding facility with this layout for softbills. It simply evolved as more enclosures were added to accommodate the growing colony of Pekin Robins; however, the complex layout provides good flexibility for managing breeding activities. The service corridor (shown on the diagram) connects to a building with other aviary systems and this covered and secure space is often used to lure birds out of their planted aviaries in order to be captured or moved away to allow for a nest to be inspected, chicks to be banded (ringed) or to permit wire-to-wire visits by other birds to the occupants of the above enclosures.

*Peter Karsten***Male singing.****Pairing and the first nesting attempt**

The male was kept in the holding enclosure and the raspberry cage and the female was kept in the corridor enclosure. The male soon demonstrated aggressive behaviour by flying at the female, who sometimes stood her ground and flashed her raised chest feathers at him in the same way that he tried to intimidate her. I interpreted this as territorial behaviour and not courtship. Both did some low-volume singing at first, some of which was barely audible. I observed the birds through binoculars from a nearby building and noted their singing by observing the movement of their ruffled throat feathers and, at times, by observing their open beaks. Within two weeks of their arrival the male sang louder and more frequently than the female. He continued to fly towards the female who was on the other side of the wire mesh, but following his initial threat display, sat by the wire which separated them, with the female close to him on the other side. The female came more frequently to the wire mesh that was separating them and, on March 10th, two slides between the enclosures were opened. The male chased the female as she entered his enclosure and pursued her in her aviary as well, but did not make body contact with her. The female would fly towards him, but always retreated when he flew in her direction. This pattern of behaviour remained constant. He continued to show discomfort due to the gout and often sat near a heat lamp, which was provided to improve his blood circulation and reduce the accumulation of uric acid in

his right leg. He frequently sat with his chest resting on a perch or a flat surface. His health improved by the third week of April and he began to show more aggression towards the female. No courtship feeding was seen and the compatibility of the two birds was called into question. Three more attempts were made to pair the male with the female, but on each occasion resulted in him chasing her more vigorously and intimidating her to a point where she hid beneath vegetation in her enclosure. Further attempts were made off and on between May-August. I saw the female twice during that time showing fledgling-like begging behaviour by crouching low on a perch and quivering her wings, but the male did not respond by feeding her. As the breeding season was coming to a close and my hopes of them breeding had vanished, he was moved to a distant aviary measuring 30ft x 16ft x 12ft high (approx. 9.1m x 4.8m x 3.6m high).

Early in November I was able to exchange a Pekin Robin for a European Robin. It was believed to be a male and had been kept by a Chinese bird fancier in a small, traditional Chinese songbird cage. The bird appeared to be in good health, but due to the limited amount of exercise it had been able to take in the small cage, I was suspicious of its overall physical condition. The playing of taped European Robin song triggered vigorous singing and encouraged me to hope that I had indeed acquired a male. As I had misjudged the sexes before, I followed up with a DNA test using a drop of blood from a toenail clipped just short enough so as not to cause undue bleeding. The test confirmed the bird was a male.

I made no attempt to introduce the new male to the female, as it was much too early in the season to expect courtship behaviour. He and the female were housed in the same enclosures that were used before. The males were in aviaries some 20m (65ft) apart and the singing of one male clearly spurred the other on. There was some vocalisation from the female as well during that time.

In the wild the female European Robin will seek out a male during the winter months by entering his territory. Pairing does not happen spontaneously, some familiarisation occurs while the gradual, seasonal development of the reproductive organs and, in particular, the production of sex hormones suppresses aggression and makes both birds receptive to mating. I tried the female in the large habitat enclosure with male No.1 on November 27th. They met on a branch and displayed intense territorial behaviour. The male immediately raised his fluffed-up chest and throat and stood as tall as he could, while the female came closer and presented her chest in a similar fashion and also fluffed-up her whitish under tail-coverts and raised her tail high. Both did some typical curtsying before the female flew off. They were kept together under close observation for a few days in this

large and densely planted aviary, with the male only occasionally chasing the female. I then moved the female back to her own smaller enclosure.

During December the temperature often dipped to -4°C to -6°C (approx. 25°F - 22°F), which clearly aggravated the male's gout. He stopped using his right leg and was brought in to spend the winter in a heated enclosure in which he often sat near a heat lamp. In March he was released again into the large habitat aviary, and shortly afterwards was found one morning with no tail feathers. I had noticed a pair of Coal Tits *Parus ater* becoming very aggressive and pestering him at feeding time. The male Coal Tit had killed another male Coal Tit a few days before while taking over a nest box. The Coal Tits also harassed a pair of Blue Tits *P. caeruleus*, which led to the pair of Blue Tits being removed from the enclosure. The Blue Tits thanked me later by raising six chicks. The European Robin was returned to the indoor enclosure and began to undergo an out of season partial moult of facial and body feathers, which I assumed was due to his gout problem affecting his metabolism. The prospect of him successfully breeding with the female seemed very slim.

Meanwhile, from November-February male No.2 was housed in a large planted aviary with two pairs of Pekin Robins, a Silver-eared Mesia *L. argentauris* and some European finches. By February he was developing territorial behaviour and would systematically drive the Pekin Robins away from the food dish. Even after two dishes were set up 10ft (approx. 3m) apart, he successfully patrolled these so that the Pekin Robins were potentially at risk of starvation. Presumably the drive to establish a breeding territory elevated his aggression. I have observed the reverse occur, whereby Pekin Robins were systemically interfering with the feeding of juvenile European Robins and tits. The aggressors simply flew to the dish the moment other birds approached it and, though they did not actually chase or attack them, effectively prevented them from feeding. This easily overlooked problem can lead to the loss of birds, especially during cold weather. The culprits were caught in a self-triggering trap baited with waxworms. Male No.2 was placed in the aviary next to the female and, as expected, there were immediate confrontations at the wire mesh which separated them. On March 10th the male was given access to the female. He was, however, kept under strict observation and was seen chasing the female, but made no contact with her. Although these short pursuits are part of courtship behaviour, there is a fine line between persistent and dangerous attacks and these short courtship chases. The two birds were left together, but after a few days the male became increasingly aggressive and the two were separated again. By April 21st they had been reunited and there were no further confrontations. The female was often hiding in the dense vegetation while

*Peter Karsten***Male feeding female.**

the male sang intensely. On May 5th I observed the female sitting on a perch within 2ft (0.6m) of the male and holding a waxworm in her beak, but not eating it. On May 7th the female was flashing her under tail-coverts at the male. The male sang much less that day. There was a sudden change in the daily routine, with the female failing to show up for insects at the evening feed. On May 8th the female began to busily gather nesting material. She pulled on a patch of moss and picked up strands of it and also other plant fibres, old leaves and some grasses, followed by horsehair, which I had quickly laid out. I took several photos of this activity, during which she ignored me, so preoccupied was she picking up the horsehair. She chose light coloured hair in preference to dark coloured hair. The male stayed close by, picking up horsehair occasionally, but then dropping it. He did not participate in building the nest, but kept a watch and sang quietly. The female never flew directly to the nest but slipped through the undergrowth and was soon out of sight. I had placed five nest boxes in the aviary and it was some time before I was able to confirm which box she had chosen. They were made of 10in (25.5cm) long sections of hollow cedar log, with an outer diameter of approximately 8in (20.5cm) and an inner diameter of 5in (12.7cm). A piece of plywood was screwed to the back and a piece of offcut was screwed onto the front of the box, leaving a slot-shaped opening about 1in-2in (25mm-50mm) high (see photo p. 112). The female filled the cavity with the aforementioned nest materials and completed the nest with

*Peter Karsten***Nest and eggs.**

a perfect lining of horsehair. She had apparently completed the nest that evening, as no further nest material was picked up the following day. I had mounted a video camera at the nest site while the pair was searching for insects in the service corridor. I let them do this earlier to condition them to being locked away from the nest site so that I could inspect it.

First clutch

Two eggs were discovered on May 10th, the female evidently having laid her first egg immediately after completing the nest. The male was seen on the TV monitor flying to the rim of the nest and looking in. Both birds became secretive and did not come to pick up insects when they were called. Also, the male's singing was considerably quieter and shorter in duration. Food consumption increased. They were fed waxworms, waxmoths and crickets, plus some white-skinned mealworms, egg cake and home-made softbill mix. A dish containing finely crushed eggshell and a mineral supplement is always present in the aviary. The female began incubation on May 14th. The male was observed feeding her on the nest on May 24th. The following day I had to travel to Germany and was to be away until June 3rd. The eggs were expected to hatch on May 28th-May 29th. Some male European Robins have been accused of throwing out their newly-hatched chicks and a judgement call had to be made on whether or not to leave him in the aviary. As he showed normal behaviour by feeding the female on the nest, I decided to leave him in the aviary with the female. My understanding

wife was left to look after the 20 aviaries housing some 50 birds - a task she took on with considerable trepidation. After all, these were the first European Robins to have nested in my aviaries and, as far as I was aware, there were no others in Canada.

Although my wife provided them with ample supplies of waxworms and crickets, on my return I found one dead chick in the nest and two carcasses on the aviary floor. The chick in the nest appeared to have been abandoned and the two dead chicks on the aviary floor appeared to have been damaged, but it was not clear whether the damage had been caused by the parents or possibly a mouse. The chicks looked as so they may have lived for about two days. What, I asked myself, had gone wrong? The disappointment was undeniable but short-lived thanks to the fact that the pair quickly re-nested. I discovered the probable answer to my question when the second clutch hatched and the size of the insect food, proved to be critical.

Second clutch

June 3rd. I made another enticing nest box for the adjoining flight and the next morning the female was carrying nesting material into it. She worked on the nest for part of each of the following three days.

June 7th. I could see one egg in the nest. During the day the male sang louder and more often. Watching the birds on the TV monitor, I saw the female sit on the nest at times prior to incubation beginning and twice saw the male bring food to her.

June 13th. Incubation began. Four eggs were seen in the nest the previous day and, on June 17th, I saw six eggs in the nest. She likely began incubation after she had laid the fifth egg.

June 25th. On the TV monitor I watched the female spend a long period of time looking into the bottom of the nest and later take waxworms to the nest and appear to offer them to a chick or chicks. I took the precaution of locking away the male in case he had been responsible for evicting the chicks from the previous nest.

June 26th. The temperature was 31°C (87.8°F) in the shade and the female did practically no brooding. Leafy branches were placed on the roof to shade the nest. I set up a camera about 2ft (0.6m) from the nest and while I was doing this the female flew repeatedly at my hand and emitted a hissing sound. Of the food offered, the female selected only small waxworms, small crickets and buffalo worms. I believe it is critical to provide small-sized insect food during the first few days and that the lack of sufficiently small insect food probably led to the death of the first brood of chicks. The female did not feed the chicks adult crickets or mealworms, not even soft-bodied larvae. On the second day she fed them waxmoths - wings and all. Then, as the chicks grew, she became less selective about the size of the insects,

though she continued to show a bias towards small insects. Most of the faecal sacs were consumed but a few were carried away and stuck on a far perch. Later, most faecal sacs were deposited on one spot on that particular perch (see photo p.114) and only a few were consumed.

June 30th. On the TV monitor I watched the female constantly picking at the chicks and standing over them in the nest without feeding them. The chicks were gaping, which may have been to regulate their body temperature and/or may have been because they were hungry. They shifted about a lot in the nest and stretched and shook their necks as if irritated by the female's grooming. This went on from 4.00pm-6.30pm and I became concerned that the female might have lost her feeding response and that the chicks were starving or sick. Twice the female dived deep down into the nest with her wings beating and shook the nest, but I could not see what she was picking at or trying to remove. At 8.00 pm, in desperation, I released the male back into the aviary in an attempt to break the stalemate. He flew towards the nest and perched about 2ft (0.6m) from it. As he watched the nest intently, I tossed in more waxworms so that they were clearly in view and placed more crickets in the self-feeder (described earlier). The female suddenly left the nest and began to feed, watched by the male; who joined her feeding the chicks at 9.00pm.

July 1st. Everything was perfect, with both parents caring for the chicks. Did the female, I wondered, need the support of the male or had the temperature been too high for the comfort of the chicks. The food offered in 12 feedings amounted to: 95 waxworms, 16 waxmoths, 145 crickets and 350 buffalo worms, a total of 606 insects.

July 2nd. The temperature climbed to 33°C (91.4°F) and in the afternoon both parents sat motionless near the nest, holding waxworms in their beaks but not feeding them to the chicks for several hours. When the parents did move, the chicks gaped and became active. I suspected that the male was guarding the nest and preventing the female from feeding them. (I have often seen competition over parental duties between the male and female Pekin Robin.) During the past three days, a problem had developed with the male's right eye and, as a result, he kept it closed most of the time and the discomfort from this may have affected his behaviour. After I had removed him from the aviary in order to treat his eye, the female resumed feeding the chicks and I watched her removing the faecal sacs, indicating that the chicks were feeding normally.

July 3rd & July 4th. The female fed the chicks regularly and sat near the nest guarding it.

July 5th. The male was returned to the aviary. The chicks were apprehensive to start with and ducked their heads when he made his first

*Peter Karsten***Sitting guarding the nest box.**

three or four approaches, but soon gaped and eagerly took food from him. To my surprise, the female had, by noon, started to build a new nest in another box. She did though continue to participate in the feeding of the chicks and the pair continued to work together harmoniously throughout the following day.

July 7th. The new nest was completed and the chicks, who were now defecating over the rim of the nest and doing a lot of preening, were being fed mostly by the male.

July 8th. Two of the chicks fledged at 5.00pm.

July 9th. The remaining chicks had fledged by 7.30am and were hiding in various parts of the aviary, near or on the ground. Food offered in eight feedings amounted to: 100 waxworms, 10 waxmoths, 105 crickets and 350 buffalo worms, a total of 565 insects. The first egg was seen in the new nest.

July 11th. The young were widely dispersed throughout the aviary. For the first time the male was seen feeding mealworms to them. There were three eggs in the new nest.

July 13th. The female had begun to incubate the latest clutch of eggs. Food offered to the young and parents during eight feedings amounted to: 86 waxworms, 180 crickets and 150 buffalo worms, a total of 416 insects.

July 14th. The female was continuing to incubate the latest clutch of eggs

and was also occasionally feeding the young. The male had stopped feeding them regularly and I became concerned that they might starve. I caught two of the young and attempted to feed them by hand using a thin stick, but they refused to take food from me. One youngster weighed 15.1g.

July 15th. The young were 20 days old and were seen picking up waxworms from the ground. The female came off the nest for three to five minutes and, together with the male, fed the young. Food offered to the family during that day amounted to: 90-100 crickets (of $\frac{1}{4}$ in (7mm) abdomen length) in three feedings; 100-120 waxworms in four feedings; and 200-250 buffalo worms in a single feeding.

July 18th. The young were flying down to the ground to pick up waxworms.

July 21st. The young were active and flying about. Their tail feathers measured about $\frac{1}{4}$ in (7mm) long. They appeared to be interested in listening to the taped songs of European Robins.

July 24th. The young were independent of their parents and were moved to an adjoining aviary. I found a mummified chick in the second nest, which was presumably the missing sixth chick.

Third clutch

July 26th. The latest clutch of eggs hatched. The male fed the fledged young at times and sang more today, but did not go near the nest.

July 27th. The female was feeding busily or standing over the nest watching the chicks intently and from time to time shaking the nest and removing foreign matter. The male was still not seen near the nest and by the end of the day looked tired and listless. His eye problem persisted and he was resting on his abdomen. His tail feathers were rough and untidy.

July 30th. As the juveniles had begun squabbling, I caught them and moved them to separate enclosures. The male looked exhausted: his head was slumped forward and resting on the ground. The female flew down and sat near him for a moment, but then resumed feeding the latest brood.

July 31st. The male was unable to fly up and had coordination problems, also his eye was worse and he could no longer open it. He was moved to a hospital cage and died on August 14th. He weighed 22.5g, which is above the normal range. The post mortem examination gave no clue to the cause of death and there was no obvious infection at the site of the right eye. His age was unknown. The female continued to feed the chicks.

August 1st. The young of the previous clutch were separated from each other. Some of them, presumed to be males, began to sing very softly.

August 2nd-August 7th. The female continued to care for the chicks herself. One jumped out of the nest, probably because of the amount of noise I made placing boards on the aviary roof above the nest to provide

*Peter Karsten***Female depositing faecal sacs on perch.**

extra shade. This chick - which weighed 10.5g - was unable to stand up straight and fell over if it attempted to run. It developed diarrhoea and died three days later.

August 8th & August 9th. The four remaining chicks of clutch No.3 fledged. They looked healthy and dispersed around the aviary, scurrying about like mice.

August 18th. The juveniles of clutch No.2 - now seven weeks old - were showing the first orange feathers at the lower margin of the chest patch.

August 24th. They were all feeding themselves and rapidly acquiring adult plumage. The adult female began to moult and lost all her tail feathers.

September 1st. The young of clutch No.2 - now almost nine weeks old - had nearly completed their moult into adult plumage.

September 22nd. Found a dead young female from clutch No.2, that had managed to slip through into the large enclosure occupied by male No.1 with the gout problem. She was wedged into a corner next to a rock and showed severe trauma to the head. The injury was typical of the scalping attacks by rival European Robins and noted among Pekin Robins as well.

October 7th. The birds of clutch No.3 - now 10 weeks old - had completed their moult into adult plumage. The bodyweights of the 2006-hatched birds of clutches Nos.2 & 3 ranged from 14.5g-19.1g.

October 15th & October 31st. Shipped two pairs of juveniles to Winnipeg and Toronto.

*Peter Karsten***Juvenile European Robin.****Summary**

The author began 2006 with 2.1 European Robins. One pair was formed that had three nests and produced three clutches of eggs. The first chicks died, but the two following nests produced five and four young that were reared to independence. The housing, feeding and step-by-step breeding events are described and illustrated. The author has been breeding Pekin Robins since 1999 and, to date, 80 offspring have been raised, some to the third generation. Key contributors to success have been housing one breeding pair per aviary, with dense cover, minimal disturbance, targeted nest support, customized diet, on-site propagation of live insects for feeding chick-rearing birds, and remote camera monitoring. European Robins are highly spirited birds that are a delight to care for. They quickly find their way into the heart of their keeper and clever ways to obtain food. However, they tenaciously defend their territory and special attention needs to be paid to this aspect of their management.

Detailed analysis of the softbill diet, relevant management practises and the propagation and care of live insect cultures can be found in my book *Pekin Robins and Small Softbills - Management and Breeding*, reviewed in the *Avicultural Magazine* Vol.113, No.4, pp.182-183 (2007).

Appendix

Diet

It has three components (besides a supply of live insects, a vitamin/mineral supplement and clean drinking water): 1) dry mix; 2) egg cake; 3) moistening agents. The dry mix is prepared in batches for freezing or refrigeration, by mixing it with finely chopped egg cake (see recipes below), grated carrot, apple, cottage cheese and hard-boiled egg, to obtain a moist, crumbly texture.

Dry mix

20 parts	Proprietary softbill pellets (18% protein)
20 "	Kitten chow or puppy chow (28% - 32% protein)
5 "	Oatmeal
4 "	Mueseli grapenut breakfast cereal
4 "	Poultry layer pellets (18% protein)
2 "	Sunflower seeds
2 "	Powdered whey
1 part	Powdered yeast
1 "	Hazel nuts
1 "	Flax seed
1 "	Bee pollen
1 "	Wheat bran
1 "	Wheat germ

The coarse ingredients should be finely ground (e.g. in a coffee grinder). The egg cake is finely diced and dusted with a vitamin/mineral supplement and mixed with the dry mix in equal proportions.

Egg cake

1½ cups	Margarine
1½ "	Sugar
1½ "	Wholewheat flour
¾ cup	Soya protein/flour (from health food store)
¼ "	Gluten
1½ teaspoons	baking powder
1 tablespoon	lemon juice
6 Eggs	

Cream margarine and add sugar. Beat together until very fluffy and light (this is important). Then add eggs one at a time, beating well after each egg

is added. Add dry ingredients, mix and divide batter between four loaf pans (about 3¼in x 7in x 2¼in high (8.5cm x 18cm x 6cm high)) or two larger ones, lined with wax paper. Bake for 50 minutes (or until done) in an oven preheated to 350°F (141°C). Remove from oven and leave in pans for about 10 minutes. Then remove from pans and place on racks to cool. Do not remove wax paper. Once cool they can be used to feed the birds or placed in a freezer for future use. The loaf currently in use is kept in a refrigerator in a plastic bag to help retain moisture.

Finely crushed eggshell is always available in a separate dish.

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Peter Karsten was born in Germany and, following the completion of his formal education in Germany and Sweden, emigrated to Canada in 1962. After a 30 year career at Calgary Zoo, for 20 years of which he held the position of Zoo Director and Executive Director, he retired in 1994 to the Gulf Islands of British Columbia, where he breeds Pekin Robins, European Robins and other small softbills. He can be contacted at: 5741 Stanehill Place, Denman Island, B.C., VOR 1T0. E-mail: silypine@island.net

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ST VINCENT PARROT CHICK

Houston Zoo in Texas, which has a long history of keeping and breeding the St Vincent Parrot *Amazona guildingii* (I saw them there in the early 1970s), has this year raised a female chick. It hatched earlier in the year, after an incubation period of 25 days, and was hand-reared by Chris Holmes, the zoo's Bird Department Supervisor. For the first 28 days the chick was fed every two hours from 5.00am to midnight. It was taken home by Chris each evening in a specially made climate-controlled carrier and returned to

BREEDING THE BROWN-BREASTED BARBET *Lybius melanopterus* AT WADDESDON MANOR

by Ian Edmans and Andrew Owen

The Brown-breasted Barbet is a distinctive African barbet found in Somalia, Kenya, Tanzania, Malawi and Mozambique. It is found in forest edges, remnant forest patches, tree cultivation and in tall trees in towns and



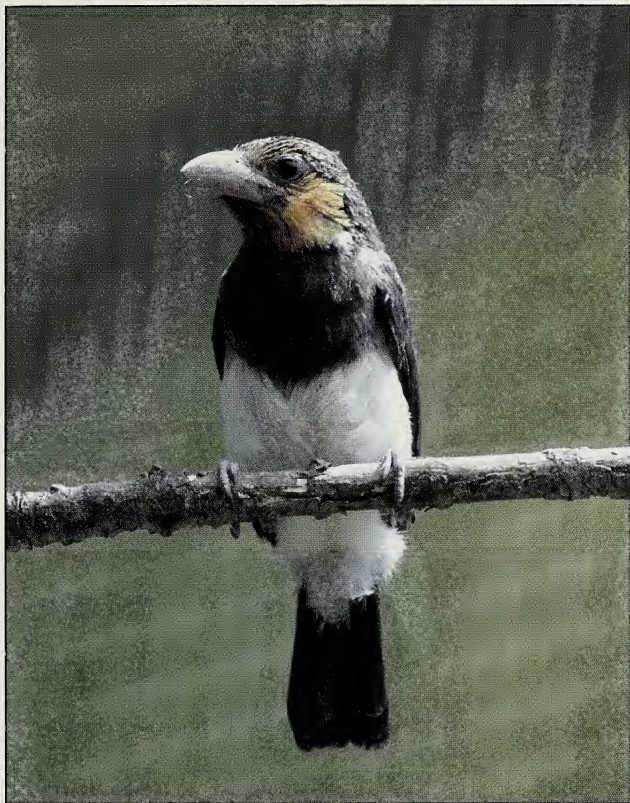
Ian Edmans

Adult male Brown-breasted Barbet feeding female.



Andrew Owen

Adult female with one recently fledged youngster (right).

*Andrew Owen*

Recently fledged young Brown-breasted Barbet.

villages, occurring regularly up to an altitude of 600m (approx. 1,968ft) and unusually up to 1,700m (approx. 5,576ft) in Tanzania and Malawi. It is usually uncommon and local (Short & Horne, 2001).

It is a medium-sized barbet, approximately 16cm (6¼in) in length. Adults have a bright red head, cheeks and throat. From the rear of the crown and behind the eyes to the nape and shoulders, the red is flecked with dark brown. The chest and back are brown diffused with grey or white feathers

*Ian Edmans*

Adult Brown-breasted Barbet emerging from nest hole.

and the wings, tail, thighs and lower flanks are dark brown. The belly and vent are white and there is brown and white feathering on the lower back. The bill is coloured greyish-horn, the eyes are reddish-brown and the legs and feet are dark grey.

In the wild it is primarily a frugivorous species, feeding on figs, berries and other fruits, that also hawks for insects such as bees and wasps. It is a social species, breeding and foraging in extended family groups of up to six or seven birds.

A pair of Brown-breasted Barbets arrived at Waddesdon in September 2007 and following a 30-day quarantine period the pair was moved to one of the on-show aviaries. This measures approximately 5m long x 5m wide x 7m high (16ft long x 16ft wide x 23ft high), with the roof half covered and the birds having access to a heated indoor shelter. The aviary is furnished with natural perches and planted with several shrubs and bushes, including

box and bamboo. The floor has a covering of wood chips, mulch and mix and leaf litter and there is a small pool in the centre of the aviary; however, the barbets have never been seen to drink from this or bathe in it. They share the aviary and shelter with a pair of Snowy-crowned Robin Chats *Cossypha niveicapilla*, Emerald Starlings *Lamprolornis iris* and Purple-crested Turacos *Tauraco porphyreolophus*. They receive a diet of diced fruit, an insectivorous mix, T16 low iron pellets and a variety of insects. Fruit though appears to form the bulk of the barbet's diet.

Three large, dead Elm tree *Ulmus* sp. logs, that were found in nearby woodland were placed at various heights to encourage natural nesting behaviour. The barbets also had access to a nest box for roosting, but preferred to spend the winter months in the heated shelter. Having made initial attempts to excavate holes in two of the logs, the pair almost immediately turned its attention to the third log. This measures 2m (approx. 6ft 6in) high and 25cm (approx. 10in) in diameter. It leans at an angle of approximately 40 degrees and is on top of a second log, which raises it to about 2.4m (8ft) above the ground. The entrance to the nest cavity that the pair excavated is 5cm (2in) in diameter and 2.1m (approx. 7ft) above the ground. The depth of the nest chamber is not known, nor the exact dates the eggs were laid or exactly when the chicks hatched. Colin Scott, who also keeps this species and attempted unsuccessfully to hand-rear a chick, recorded an incubation period of 16 days. We believe that our chicks hatched about May 12th and that only the female carried out the incubation and brooding duties. About four weeks before the chicks fledged, the female stopped brooding them and assisted the male feeding them. At the time the chicks could be heard in the nest.

Throughout the period a variety of livefood was provided including at first, small mealworms *Tenebrio molitor* and small 'home-grown' waxmoth larvae *Galleria mellonella*, and later soft-bodied mealworms that had recently shed their skins. Just prior to the chicks fledging regular-sized mealworms and Black Crickets *Gryllus bimaculatus* were introduced. Both parents were observed masticating fruit and carrying it to the nest in their closed bills. In addition to fruit and insects, T16 low iron pellets were also regularly fed to the chicks.

The two chicks were first seen looking out of the nest hole two days prior to fledging. The first chick fledged on June 22nd, followed by the second chick a day later. Both chicks continued to return to the nest for periods of time during the day and, occasionally, returned to the nest for the entire day. It is thought that all four barbets roosted together at night in the nest log.

The young barbets were slightly smaller than the adults and had shorter, broader bills, and the face and head were pale orange, rather than bright red. Both parents continued to feed them for some time after July 3rd, 12 days

after fledging, when both juveniles were observed following their parents to the food dish and were seen to feed themselves. Within a few days of the juveniles having fledged, the adults began further work on the nest chamber. A second clutch, consisting of a further two chicks, was reared and the young of the first clutch was observed carrying food into the nest log and feeding the young when they had fledged.

The management of this and our other species of African barbets appears to be quite straightforward. We have also been successful breeding the Bearded Barbet *L. dubius* and the Spot-flanked Barbet *Tricholaema lacrymosa* using the same techniques. There are a few other aviculturists in the UK keeping the Brown-breasted Barbet and we hope that they will also be successful with this species, so that we can attempt to establish a viable captive-breeding population.

Products mentioned in the text

Nutribird T16 low iron pellets: Versele-Laga NV, Kapellestraat 70, B-9800, Deinze, Belgium.

Reference

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As described above, the Brown-breasted Barbet *Lybius melanopterus*, has been bred at Waddesdon Manor aviaries. This is probably the first successful breeding of this species in Great Britain or Ireland. Anyone who knows of a previous breeding is asked to inform the Hon. Secretary.

Waddesdon Manor (website: www.waddesdon.org.uk), near Aylesbury, Buckinghamshire HP18 0JH, was built (1874-1889) by Baron Ferdinand de Rothschild. On a hilltop overlooking Aylesbury Vale, it has one of the finest Victoria gardens in the UK, at the heart of which are the aviaries. Mr James de Rothschild bequeathed Waddesdon to the National Trust in 1957 and, a family charitable trust, under the chairmanship of Lord Rothschild, now manages it.

GOOSANDER X EIDER HYBRIDS AT WWT MARTIN MERE

by J. Meldrum and P. J. Wisniewski

The Eurasian Goosander *Mergus m. merganser* and European Eider *Somateria m. mollissima* have been maintained in the same exhibit for a period in excess of 23 years at WWT (Wildfowl & Wetlands Trust) Martin Mere, Burscough, Lancashire, and are commonly kept together at other WWT centres. At WWT Martin Mere they have shared their exhibit with a number of waterfowl species during this period but currently cohabit with Greater Flamingos *Phoenicopterus roseus* and Canvasbacks *Aythya valisineria*. The undesirable production of hybrids has never previously been an issue with goosanders and eiders and has never previously been recorded in WWT collections (Brown, M. pers. comm.). Neither Johnsgard (1965) or Rutgers and Norris (1979) mentioned this hybrid though the former noted hybrids between goosander and Hooded Merganser *Lophodytes cucullatus*.



Goosander x Eider ducklings.



Three older Goosander x Eider ducklings with two juvenile European Goldeneyes.

Male specimens observed in the wild in Europe, one of which appeared to be a drake eider crossed with a female goosander, were documented by Gillham and Gillham (1996) and Gillham and Gillham (2002). The following hybrids were also noted:

Eurasian Goosander x Common Shelduck *Tadorna tadorna*

Eurasian Goosander x Smew *Megellus albellus*

Eurasian Goosander x Redhead *A. americana*

European Eider x Shelduck

European Eider x Mallard *Anas platyrhynchos*

European Eider x King Eider *S. spectabilis*

European Eider x Steller's Eider *Polysticta stelleri*

During 2005 two clutches of Eurasian Goosander drake x European Eider duck hybrids were produced. The first clutch was laid next to a ditch, under conifers and comprised three eggs of which two proved fertile. The second clutch was laid in a clump of Pampas Grass *Cortaderia selloana* and comprised four fertile eggs. Subsequently one of these became addled and a second chick was dead in the shell.

The first clutch, which hatched on June 2nd 2005, consisted of 1.1 and the second clutch, which hatched on June 24th 2005, consisted of 0.2. The clutches were laid three weeks apart so there is a possibility that both clutches were laid by the same European Eider duck.

Appearance

The ducklings, not surprisingly, had characteristics of both the Eurasian Goosander and European Eider. The newly-hatched 'gooders' were of similar size and shape to eiders. The down was dark brown on the back and sides, though not quite as dark as that of an eider duckling but with white down on the belly and with a white mark on the left- and right-hand side of the back (characteristic of a goosander). The bill resembled the sawbill of a goosander duckling.

As fully-grown juveniles the 'gooders' developed the bulk of an eider combined with the length of a goosander, the overall appearance being more sawbill-like. The male was fractionally larger and heavier than the female but due to its coloration gave the appearance of being noticeably bigger (see Table 1). Both sexes were predominantly brown with darker wing-tips, a white speculum divided by a black line, a brownish head and a mottled grey, brown and white chest and belly. The bill was blue-grey and the legs and feet were yellowish. Prior to moulting into adult plumage, the drake developed a white chest band, faint black and white vermiculations to the flanks and a mottled brown and white belly.



Juvenile Goosander x Eider hybrids.



Drake and three females in adult plumage.

Table 1. Biometrics of 2005 (adult) hybrids.

	Weight	Wing	Skull	Tarsus
Male	1.60kg	295mm	124.9mm	54.0mm
Female 1	1.45kg	290mm	116.5mm	54.1mm
Female 2	1.55kg	286mm	118.9mm	50.2mm
Female 3	1.55kg	302mm	122.0mm	54.0mm

As adults the females remained similar in coloration but developed a paler, mottled chest and neck and more chestnut coloured head with a paler wash between the eye and base of the bill, while the leg coloration intensified to a brighter orange and the bill to flesh pink. The white speculum divided by a broad black band became more obvious.

In contrast, the drake had a white head, neck and chest with the white continuing onto the back and wings. Above the eye was a kidney-shaped black smudge and a diffuse yellow-brown patch was present between the eye and the base of the bill and behind the cheek. A thin black collar was present. The flanks had black and white vermiculations, the tertials were white edged with black, the wing-tips were black and the vent and tail were grey. The bill turned to a horn-colour and then grey near the tip. The legs



A closer view of the drake.

and feet were orange.

Vocalisations

As juveniles they produced mostly eider-like calls similar to the “po-po-po” calls of the eider duck.

Behaviour

This was considerably more eider-like. Ducklings huddled together like eider ducklings as opposed to frantically running about in different directions, behaviour more characteristic of goosander ducklings. The ducklings of clutch No.1 were reared with two European Goldeneye *Bucephala clangula* and one Hooded Merganser duckling, whilst those of clutch No.2 were reared with three European Eider ducklings. All mixed together well with no obvious dominance hierarchy or aggression. Interestingly, when the two clutches were put together (at seven weeks and four weeks respectively) with juvenile European Goldeneyes, European Eiders, Smew and Hooded Mergansers, the four ‘gooders’ immediately grouped together and continued to keep themselves to themselves, never bullying or being bullied by any other species.

A final twist

Despite the fact that no goosander x eider hybrids had previously been reported at WWT centres, 2005 for reasons which will remain a mystery, proved a bumper year for such hybrids. At WWT Slimbridge and WWT Llanelli similar hybrid pairings occurred. In 2006 another clutch of eggs was laid in Pampas Grass at WWT Martin Mere. Of the five eggs one was addled and the others were fertile and hatched on June 13th. In 2007 two clutches were laid, the first, of three fertile eggs, in a nest under conifers of which 2.0 ducklings hatched on May 24th and 0.1 on May 26th and the second, of four eggs, of which two were clear and one was dead in the shell. 0.1 hatched on June 18th. The first nest also contained a dumped eider egg which hatched on May 24th. It is possible that all of the Martin Mere hybrids originated from the same parents. Whether these birds will themselves prove to be fertile remains to be seen.

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Pat Wisniewski joined the WWT in 1983 and later became centre manager at Martin Mere, a position he held for 16 years. Described as "one of the greatest of the all-round naturalists", he died in May 2008, just a few weeks after submitting the above article co-authored with J. Meldrum.

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BREEDING THE JAVAN MUNIA

Lonchura leucogastroides

by Neville Brickell

Introduction

There was confusion as to the correct identification of this species by authors of avicultural works during the early years. It has been known by a number of alternative names, such as Black-rumped Munia, Javanese Mannikin and Javanese White-bellied Munia, all of which were acceptable.



Neville Brickell

Javan Munia.

Names such as Black-headed or Black-beaked Bronze Mannikin and Javan Magpie Mannikin, however, were only likely to lead to confusion and were best avoided. Kingston (1998) was of the opinion that confusion over the identification of this munia in Australia, stems from the fact that there is

variation in birds kept in Australian aviculture, probably attributable to fertile hybrids having been produced by crossing it with other small south Asian munias.

Description

Length 11cm-11.5cm (4¼in-4½in). Head, face and upper breast black with a purplish sheen on adult birds in fresh plumage. Lower breast, belly and flanks white, under tail-coverts dark brown to black. The upperparts are medium brown and unstreaked, the rump is dark and the tail is dark brown to blackish, with the central tail feathers graduated and slightly elongated at the tip. The upper mandible is dark grey to blackish and the lower mandible is pale greyish blue. The irises are dark brown and the legs and feet are grey. Juveniles have paler brown upperparts and the belly and flanks are buff to cream with some streaking.

The sexes look alike, however, Restall (1987) felt that the ridge of the culmen where it meets the forehead was, on his adult birds, more pronounced on the males than on the females. He also noticed a difference between the markings on the flank feathers of first year males and females and provided sketches illustrating these differences.

Voice

The male has a soft, pleasing purring or rattling song, whilst the contact call consists of a “*peteet*” or “*pee-ee-eet*.” The call notes of the male and female differ.

Distribution

Southern Sumatra, Java, Bali and Lombok (Indonesia). Strange (2002) stated that it is a common resident on the islands of Java, Bali and Lombok, that has expanded its range into southern Sumatra, either naturally or possibly has been introduced there. Restall (1987) stated that it was introduced to Singapore in 1922 and was considered the most abundant munia in the region. Gibson-Hill (1949) was of the opinion that imported birds occasionally escaped and formed small colonies, but these found it difficult to maintain their numbers for any length of time. Ward (1968) stated that it was an occasional visitor to Singapore and was unable to determine whether these were escaped caged birds or had spread naturally.

Status

Common and widespread on southern Sumatra, Java, Bali and Lombok. Strange (2002) described it as one of the most numerous birds in its range.

Habitat

Found in all kinds of open country, grasslands, cultivated fields and gardens, from the beach up to 1,800m (approx. 5,900ft). It can be seen in hotel gardens, parks and on golf courses, etc. Restall (1987) described

watching one feeding among the plants growing in the window boxes at the edge of the balcony of his first floor hotel room in Singapore.

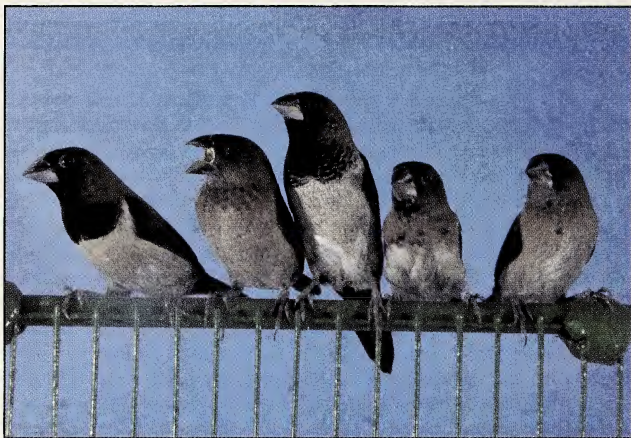
Feeding

During the morning they spread out in loose flocks to feed on seeds and insects and congregate in larger flocks at evening roosts in large trees, according to Strange (2002) in his guide to the birds of Indonesia. In Singapore they are said to feed in trees and shrubs in parkland and on the seeding heads of both indigenous and exotic grasses, notably Bermuda Grass *Cynodon dactylon* (which is found in most warmer regions of the world) and Buffalo Grass *Stenotaphrum secundatum*. Restall observed them feeding in a clump of *Saccharum arundinaceum*, a member of the sugar cane family. They also visit paddy fields and are known as “rice ravagers” and local children are encouraged to destroy their nests.

In captivity I feed them a good quality finch mixture consisting of red and yellow panicum, Japanese millet and mixed canary seed. From waste ground I gather Jungle Rice *Echinochloa colona* and the grasses, Rescue *Bromus unioloides*, Guinea *Panicum maximum* and Johnson *Sorghum halepense*, the seeding heads of the last named needing to be crushed before they are fed to the birds. Kingston (1998) in Australia suggested also Casuarina *Casuarina* sp., lettuce and niger seed, and the seeding heads of grasses such as Carpet *Axonopus* sp., Purple Pigeon *Setaria* sp., Phalaris *Phalaris* sp. and Rye *Lodium* sp. They generally show little or no interest in greenfood but have shown a liking for Chickweed *Stellaria media*. Whilst Kingston was in agreement that the Javan Munia does not generally accept supplementary foods, Hargreaves (1999) in the UK regularly gave his birds a moist eggfood, but reported that they showed little or no interest in livefood. In the southern hemisphere, if livefood is offered, it is most likely to be termites.

Housing

My birds (each of which has a coded ring (band) on one leg) are housed in a small colony in a bank of six cages, each section measuring 1m long x 0.7m wide x 0.8m high (approx. 3ft 3in long x 2ft 3in x 2ft 6in high) and interlinked so that immature birds can, if required, be separated. Calvin (1991) kept his birds in the basement of his home in the USA, housing six pairs in a communal flight measuring 1.2m long x 0.6m wide x 0.9m high (approx. 4ft long x 2ft wide x 3ft high), with greenery such as a small banana plant, a weeping fig and miniature ornamental palms. Clumps of dried grasses were provided as nesting sites. Johnson (2004) provided tins, cane baskets, gourds and wire cylinders, whilst Kingston and I prefer half-open-fronted finch nest boxes. The former also planted bamboos and tall indigenous grasses.



Neville Brickell

Two adults and three juveniles.

Breeding

Sexing munias prior to pairing them can be a difficult undertaking, as both sexes appear to look identical. In the past, determining which were males and which were females, usually meant placing individual birds in a cage on their own in which, with luck, a lone male would begin to sing. If after a reasonable length of time, the bird did not sing, it was presumed to be a female. This procedure often had to be repeated in order obtain a satisfactory result. Today, surgical and DNA sexing, if one has access to these procedures, can solve the uncertainty of the past, otherwise most aviculturists have to continue to rely on the old methods. I have been fortunate in having a slight advantage over most local aviculturists, as I have been aware beforehand of the number of males and females I am likely to have by the end of the breeding season. This became possibly by studying the egg collection of the late Jack Scheepers (the man who discovered the Lemon-breasted Canary *Serinus citrinipectus* in 1960) over many years and learning to distinguish the differences between eggs from which male and female chicks would hatch.

In the wild the Javan Munia nests in trees, bushes and shrubs. On Bali it is said to prefer mostly ornamental varieties. It nests on epiphytes and palm trees, either on the outer fronds, between the fronds or in the crown. The nest is a large ball of grasses, fibres and other vegetation, with an entrance at the side measuring about 7cm-8cm (2¾in-3¼in) across. Goodwin (1982)

cited Hoogerwerf's observation that it breeds at all times of the year in west Java, and those of Immelmann et al. that in the drier parts of east Java it breeds only in the wet season. In Singapore it breeds from May-October. It usually lays a clutch of five, or sometimes six or more, white eggs. These measure 14mm x 10mm (Restall, 1987). The incubation period is 13 days and the nestling period 18-21 days.

In the UK and Germany

Writing in 1987, Robin Restall observed that up until a few years before, this species had been virtually unknown in UK aviculture. His birds came from Indonesia in 1985 and the following year, when he visited the dealer from whom he had obtained them, the dealer had a cage with seven or eight from a customer who had bought two pairs that had produced 18 young. The anonymous customer was very likely the first person in the UK to have bred this species, followed shortly afterwards by Robin Restall. According to Robin, finch shipments from Jakarta (Indonesia) went mostly to Germany, where this munia was a free breeder.

Hybrids

In captivity hybrids have been recorded between the Javan Munia and closely related species, such as the Bengalese *L. striata* dom., Indian Silverbill *L. (Euodice) malabarica*, Bib Finch or Madagascar Munia *L. nana* and Red-backed Mannikin *L. (Spermestes) bicolor (nigriceps)*.

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Neville Brickell, who lives in Durban, South Africa, has been keeping birds for 56 years. He has kept a flock of Javan Munias for about eight years and in 2004 won a best breeder award for having raised 38 fledglings. Neville says, that because of restrictions, it is becoming increasingly difficult to obtain new, unrelated birds, in South Africa.

HERBERT WHITLEY - THE FOUNDER OF PAIGNTON ZOO

by Jo Gregson

Herbert Whitley moved to Devon in 1904. His father had died suddenly at the age of 67 and left a small fortune from his brewery business, which enabled Whitley's mother, Eleanor, to buy the Primley Estate in Paignton, to which she moved from their home town of Liverpool with her daughter and three sons.

Herbert and his brother William ran the estate and soon built up a reputation for breeding quality livestock. Their South Devon cattle were sold all over the world and their Devon Longwool sheep were sought after by local farmers. There was also a fine stable of Shire horses, which worked in the fields and were to be seen in the show ring under the Primley prefix.

Herbert had a passion for all living things, but above all he loved his pigeons. He bred many varieties for the show bench, as well as for racing. During wartime, his birds were used by the military to carry messages from our troops overseas. He loved the colour blue and would always strive to breed this colour into all of his livestock. For the Coronation in 1935, he bred the first blue Light Sussex poultry. Herbert even cultivated a blue mallow flower and named it the Primley Blue. The name Primley is derived from the Anglo-Saxon words *prim* and *ley* meaning morning meadow.

After a few years, William moved up onto Dartmoor and left the running of Primley solely to Herbert. In 1910, he bought his first exotic birds, a pair of Sulphur-crested Cockatoos *Cacatua galerita* and from there the collection grew until, in 1923, he opened Paignton Zoo. At the time a pair of Black Swans *Cygnus atratus* cost £6 6s 0d (approx. US\$10 at the present exchange rate). The zoo was to open and close twice during the following 14 years. Whitley had refused to pay entertainment tax on the grounds that his collection was educational and not for entertainment purposes. He was always keen for young people to learn and chose to close the zoo rather than back down.

Whitley was very much in touch with other collectors of that time. Both Delacour and Rothschild were great friends to him and he often sent material to (Rothschild's) Tring Museum. During the 1930s, Seth-Smith, Curator at London Zoo was charged £400 (approx. US\$640 at the present exchange rate) for a pair of Pigmy Hippopotamus *Hexaprotodon liberiensis*. A pair of manakins (Pipridae) from Clères cost a surprising £8 0s 0d (approx. US\$12.80), while bird dealers were charging as little as £1 10s 0d (approx. US\$1.75) for a pair of Red-billed Hornbills *Tockus erythrorhynchus*.

UK first breedings claimed by Whitley included: the Arabian Partridge *Alectoris melanocephala* (1927), Pheasant Pigeon *Otidiphaps nobilis* (1935), Black-naped Fruit Dove *Ptilinopus melanospila* (1932), Red Lory *Eos b. bornea* (c.1939), Dusky Lory *Pseudeos fuscata* (c.1939), Fischer's Lovebird *Agapornis fischeri* (1927), Blue-throated Conure *Pyrrhura cruentata* (1937) and Lilac-breasted Roller *Coracias caudatus* (1919).

When the Second World War broke out, Whitley was approached by Mr Goddard, the owner of Chessington Zoo (just south of London), who feared not only for the safety of his animals during bombing raids, but was also afraid that the more dangerous animals might escape. He asked if Paington would take them until better times? Whitley agreed and took some of the staff as well, one of whom was the famous elephant keeper, Alex Smith. Alex gained notoriety later in life following his appearance with a young elephant named Comet on the popular childrens' TV programme *Blue Peter*. The elephant relieved herself in front of the TV cameras and then pulled over Alex and left him lying in the rather large, steamy, pool on the studio floor. To his embarrassment the event was captured on film and has become one of live television's funniest moments and years later continues to be shown on television.

Poor eyesight prevented Whitley from going to war and as a result he was able to remain behind and care for his collection of animals, though sadly, many of them had to be culled due to wartime food shortages.

There had always been kennels at Primley containing a few terriers, setters, spaniels and collies, all of which were working dogs and were also shown. Whitley's early show success was with Great Danes, in particular Primley Prodigal, who became a champion in 1912. Many of his Great Danes lived in the house - presumably to frighten off visiting salesmen. They were also used to control the feral cat population. In 1928, Theo Marples judged the greyhound Primley Sceptre the best of all breeds of the 9,466 entries at that year's Crufts Dog Show. Oddly, Primley Sceptre was never shown again and there appears to be no record of what happened to her. She may have died from one of the many canine curses, for Whitley did not have the luxury of our modern prophylactic measures and, as a result, many of his dogs died of distemper.

He devised some home-made remedies for treating livestock, including a mix of two thirds lard and one third gunpowder applied twice a day to regrow hair on broken knees. For ringworm he recommended one measure of creosote mixed with seven measures of linseed oil applied daily. When he became ill during 1909 the doctor treated him with strychnine. He was not at all well the following day but went on to make a full recovery and repaid the doctor's kindness by giving him a Great Dane puppy.

Herbert Whitley died on September 19th 1955 at the age of 69 and was buried in the family grave at St Peters Church, Buckland in the Moor, Dartmoor. (In place of the numerals, the churchyard clock face bears the words, "My Dear Mother" which William Whitley had done as a memorial to his mother). Herbert had never married and had no heirs, so following his death, the Herbert Whitley Trust was formed to carry on many of his aims. Over the years, he had built up the reputation of being a chain-smoking recluse, who rarely slept. All of his buildings were designed with several doors so that as someone came in through one door he could slip away quietly through another. He used a rather colourful version of the English language and never missed the opportunity to play a practical joke on someone. He was though well respected by the local community and has certainly left an impressive legacy for future generations.

In 1921, he bought the Slapton Ley and surrounding area in the South Hams of Devon to prevent its likely development. Slapton Ley is unusual in comprising of two freshwater lakes not a stone's throw from the sea, thus creating a very diverse habitat. The land is leased to the Field Studies Council for a peppercorn rent of £1 (under US\$2) per annum, but with certain conditions, one of which is that no deck chairs or amusement arcades are allowed on the beach. It has a Field Studies Centre where up to 3,000 students are taught each year.

Paignton Zoo was the first UK zoo to introduce its own education unit whereby school groups can come and learn about animals first-hand. Today it can boast of having the largest centre in any zoo in the UK. A student scholarship is awarded annually by the Herbert Whitley Trust.

Whitley gifted two plots of land to local people. A playing field in the St Michaels area of Paignton and a 14 acre (approx. 6 hectares) site nearby for development as a sports centre. He was a passionate sportsman and, in particular, a lover of rugby football.

The Primley woodland and meadow adjacent to his home, he bequeathed to the people of Paignton. His house is now a home for the elderly and the small country park is much used by local people as a place to exercise their dogs. All in all he seems to have been rather a lonely man who cared very much for others. Herbert Whitley will be remembered as an unusual character and a great stockman.

Since the above article was written, Jo Gregson (e-mail: jo.gregson@paigntonzoo.org.uk) has been promoted from Senior Head Keeper of Birds to Curator of Birds at Paignton Zoo Environmental Park, Totnes Road, Paignton, Devon TQ4 7EU, UK. It is owned by The Whitley Wildlife Conservation Trust, which also owns and runs the Living Coasts at Torquay and Newquay Zoo in Cornwall.

THE BLACK-AND-WHITE LAUGHINGTHRUSH

Garrulax bicolor

In the previous issue of the magazine Vol.114, No.2, pp.70-78 (2008), Andrew Owen described the breeding of the Black-and-white Laughingthrush *Garrulax bicolor* at Waddesdon Manor aviaries. It is thought to be the first breeding in the UK of this recently recognised species. Furthermore, Andrew can find no record of it ever having been bred anywhere else in the world, so thinks that it might even be a 'world first'!

A further three chicks were hand-reared at Waddesdon during the 2008 breeding season, during which a more successful and trouble free hand-rearing diet was introduced. Papaya was no longer included in the diet, instead it consisted solely of pinkie mice, pureed to a runny consistency and first fed to the chicks 10 hours after they had hatched. Prior to this they received only a small amount of electrolyte fluid every 1½ hours to keep them hydrated.

The food was made courser as the chicks grew bigger and later they were given pieces of pinkie mice. At seven to eight days, waxmoth larvae, crickets and mealworms were added to the diet. The multivitamin supplement was also omitted from the 2008 hand-rearing process.

As far as I can recall, I first saw the Black-and-white Laughingthrush when the Avicultural Society visited Paultons Park in Hampshire in 2006, when it was known as the Sumatran Laughingthrush and continued to be treated as a subspecies of the White-crested species, i.e. *Garrulax leucolophus bicolor*. However, Andrew said, our President Raymond Sawyer, had told him that he had some 15-20 years ago. If anyone remembered them, I thought it would be Nigel Hewston or perhaps Philip Schofield or Dave Coles. Nigel said, he could certainly remember a pair that lived for some time in an aviary in the walled garden as you come out of the courtyard behind the Chestnut Lodge. The pair was the only ones he had seen prior to seeing them at Waddesdon and Paultons Park in the last couple of years. Nigel thought it had probably been in the 1980s, but could not be more specific.

A few weeks ago I had out Vol.93, No.3 (1987) of the magazine and, before putting it away, was flicking through the pages when I came upon Philip Schofield's report of the President's Garden Party - 1987 (pp.177-179) and there in the final paragraph was mention of the "White-crested Jay Thrushes from Sumatra." It would seem to have been the first reference to "*bicolor*" in the *Avicultural Magazine* and perhaps in UK aviculture. If you have any knowledge of this laughingthrush having been kept or bred in the past (or present), we would like to hear from you. -Ed.

NEWS & VIEWS

BRED FOR THE FIRST TIME IN THE UK

Geoff Masson of Paultons Park in Hampshire is keen to trace anyone who keeps the Grey Laughingthrush *Garrulax maesi* and, in particular, is keen to find anyone with a spare male. The bird bred at Paultons Park a few months ago is now feeding itself and at the time he wrote (October 8th) was just beginning to moult. It is the first time this species from China, Vietnam and Laos has been bred in the UK. Geoff had the bird DNA sexed and it is a female. Paulton Park's three Grey Laughingthrushes appear to be the only examples of this species in the UK. Geoff has made contact with a breeder in Europe who has a single bird and hopes it will prove to be a male and the breeder will be prepared to exchange it for some other species he requires. He thinks he knows of another pair in a private collection in Europe and an attempt is being made to contact this other owner with the view to planning for the future of this laughingthrush in Europe.

The pair at Paultons Park laid a second clutch and hatched, it is believed, at least one chick. Unfortunately this occurred on the weekend that Geoff was on the society's visit to Berlin and he returned to find that it had been lost - probably due to the weather. If, as hoped, the pair nest again next year, Geoff plans to remove the eggs or perhaps remove the chicks and attempt to hand-rear them. If you know of any other Grey Laughingthrushes, Geoff can be contacted by telephone: 023 8081 4442 or e-mail: Geoff@paultons.co.uk

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SUCCESS FOR VICE PRESIDENT

Avicultural Society Vice President Robin Restall, who lives in Caracas, Venezuela, is very happy that this year he has finally succeeded in breeding the Sooty Grassquit *Tiaris fuliginosa*. The successful pair, housed this time in Robin's aviary, built a fine, covered nest with a half-open front. (Robin described his earlier frustrating and unsuccessful attempts to breed this grassquit in the *Avicultural Magazine* Vol. 111, No. 2, pp. 64-74 (2005).) At the time Robin wrote (October) a pair of Blue-black Grassquits *Volatinia jacarina* was raising its fourth brood in the same nest. A pair of Lesser or Chestnut-bellied Seed-Finches *Oryzoborus angolensis* had finally bred, only for the chicks to be thrown out and dumped in the mealworm bowl. This had left the female looking unhappy, while the male - who Robin suspected of having done the 'dirty deed' - was bouncing around and singing all the time. Unfortunately, Robin found the chicks too late to attempt to hand-rear them.

A pair of Saffron Finches *Sicalis flaveola* in interim or intermediate plumage caught by a neighbour in his garden, who really wanted an old male for its song, was given to Robin and within a week had two eggs in one of his spare breeding cages. Two Spectacled or Bare-eyed Thrush nestlings *Turdus nudigenis* were brought to Robin by the gardener at the end of June and later two fledglings were brought to him. The smaller of the nestlings had a broken leg and died, but the other three birds were reared and are the subject of some notes by Robin, which will be published in a future issue of the magazine.

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AFTER A POOR START

Avicultural Society Vice President, Mike Curzon MBE, reports that after a poor start to the breeding season, results began to improve later in the year. By early September he had bred a Chestnut-backed Thrush *Zoothera dohertyi*, had three more Spot-flanked Barbets *Tricholaema lacrymosa* in the nest and had bred two Black-throated Barbets *T. melanocephala* - though sadly these were killed after they fledged. Mike has two breeding pairs of Emerald Doves *Chalcophaps indica* which, by early September, had produced 14 young and there were a further two aged one week old on the nest, plus another two eggs. He had bred two Common Bronzewings *Phaps chalcoptera* and had another one on the nest, had bred a Sulawesi Ground Dove *Gallicolumba tristigmata* and a Superb Fruit Dove *Ptilinopus superbus*, with another one on the nest. Following an earlier loss, the pair of Rose-crowned Fruit Doves *P. regina* was sitting on another egg. Two Black-naped Fruit Doves *P. melanospila* had been raised and there was another on the nest. Mike has, so far, had no luck with his Beautiful Fruit Doves *P. pulchellus* or his Coronated Fruit Doves *P. coronulatus*, but hopes they will breed next year.

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CHOICE SPECIES

Earlier this year, Josef and Natalie Lindholm - who work at The Dallas World Aquarium, where Josef is Senior Aviculturist - spent 13 days in Germany, during which time they visited nine zoological collections.

They began at Frankfurt. The zoo does not have an especially large bird collection (101 species at the time of their visit), but boasts some choice species. At the top of the list I would place the Grey-necked Picathartes *Picathartes oreas*. Hatched at the zoo in 1984, it is the last remaining

picathartes in captivity (Chris Brack's 1994 colour photo of this bird was reproduced in Vol.110, No.2, p.94 (2004)). Having previously bred the White-necked species *P. gymnocephalus*, Frankfurt first bred the Grey-necked Picathartes in 1971 and is the only zoo ever to have bred this species. Another remarkable achievement by Frankfurt is to have kept and bred the Brown-throated Wattle-eye *Platysteira cyanea* for a number of years.

Among other species in the Bird House that caught their eye were a Shoebill *Balaeniceps rex*, a breeding group of Australasian Pied Herons *Egretta picata*, Little Pied Cormorants *Phalacrocorax melanoleucus*, (wild) Budgerigars *Melopsittacus undulatus*, Blue-winged Kookaburras *Dacelo leachii*, African Pygmy Kingfishers *Ispidina picta*, Polillo Tardic Hornbills *Penelopides panini subnigra*, Kikuyu White-eyes *Zosterops poliogaster kikuyuensis*, Painted Finches *Emblema pictum* and Cuban Finches (Grassquits) *Tiaris canora*. They saw a number of species which are managed as part of European zoo breeding programmes, including the Bali Starling *Leucopsar rothschildi*, Montserrat Oriole *Icterus oberi* and Socorro Dove *Zenaida graysoni*, the dove a species for which the European Association of Zoos and Aquaria (EAZA) studbook is maintained by Frankfurt's Curator of Birds, Stefan Stadler.

Frankfurt has been breeding Red-whiskered Bulbuls *Pycnonotus jocosus* almost continually since 1964, and they saw a flock of 40 or so in the free-flight hall. Most of the 100 or more that have been bred there have been distributed among European zoos. Apparently the Red-whiskered Bulbul, which was once common in US zoos, is currently exhibited only at Honolulu Zoo – this species lives in the wild on the island of Oahu, having been introduced onto Hawaii in the mid-1960s.

In Frankfurt's Grzimekhaus, they saw a colony of Social Weavers *Philetairus socius*, whose enormous compound nest dominates the exhibit the colony share with ground squirrels *Xenus* sp. Several generations of Social Weavers have been bred there since 1980 and, it is, as Josef said, like Frankfurt's breeding of the Red-whiskered Bulbul, another remarkable example of the long-term captive breeding of a species of passerine.

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SPREADING ALONG THE RHINE

Josef and Natalie were surprised to see feral Ring-necked Parakeets *Psittacula krameri* flying free in Cologne Zoo and felt that they enhanced the generally park-like atmosphere of the zoo. It seems that this introduced-cum-escaped parakeet is now breeding in parts of Germany (as it is in parts of the UK) and is spreading steadily in increasing numbers along the Rhine.

HELP FOR THE PARROTS OF HALMAHERA

David Waugh of Loro Parque Fundación reports that Burung (BirdLife) Indonesia has initiated a project to protect the 167,300 hectares (approx. 413,398 acres) Aketajawe-Lolobata National Park, and thereby protect several species of parrot found on the Indonesian island of Halmahera, North Maluku (the Northern Moluccas). Funding for the project is being provided by Loro Parque Fundación (LPF) of Spain, the Zoological Society for the Conservation of Species and Populations (ZGAP) and the Association for the Conservation of Threatened Parrots (ACTP), both of Germany, and the Global Environment Facility (GEF).

Halmahera is home to nine species of parrot, two of which - the White (or Umbrella) Cockatoo *Cacatua alba* and Chattering Lory *Lorius g. garrulus* - are of most concern. These two species are endemic to North Maluku, with the largest populations occurring on Halmahera. The other species are the Red-flanked Lorikeet *Charmosyna placensis*, Violet-necked Lory *Eos squamata*, Moluccan Hanging Parrot *Loriculus amabilis*, Moluccan (or Amboina) King Parrot *Alisterus amboinensis*, Red-cheeked Parrot *Geoffroyus geoffroyi*, Eclectus Parrot *Eclectus roratus* and Great-billed Parrot *Tanygnathus megalorhynchus*.

The clearance and fragmentation of the island's forests have accelerated rapidly since the early 1990s and, as well as being threatened by habitat loss, Halmahera's parrots continue to be under severe pressure from trapping to supply both the domestic and international cage bird trade. It was as a result of this that, from 1994-1999, the then BirdLife International Indonesia Programme collaborated with the Indonesian Directorate General of Nature Protection and Conservation on a project, also financially supported by the LPF, to identify priority areas for parrot and biodiversity conservation on Halmahera. This led to the declaration of Aketajawe-Lolobata National Park in 2004.

However, the park had very weak management and few resources and illegal logging and bird trapping continued. The current project aims to set up an effectively managed protected area that will secure the long-term future of the White Cockatoo, Chattering Lory and other threatened species and their habitat. During the first period of this project it is important for Burung Indonesia to establish a good working relationship with officials of Aketajawe-Lolobata National Park and the Ternate Natural Resources Conservation Division. It is also important that it monitors the current wildlife trade in North Maluku. Despite the fact that there have been no domestic or export quotas for parrot species since 1999, trade has continued and parrot trapping and trading locations, along with exit points, have been identified.

MEMORIES OF DEREK GOODWIN

by John F. Burton

I was first introduced to Derek by the late Dr Denis F. Owen in the Bird Room of the Natural History Museum in South Kensington in August 1948 when I began work as a Scientific Assistant in the museum's Department of Entomology. I found Derek very friendly and eager to convey his immense enthusiasm for bird behaviour, especially that of corvids, pigeons and Phasianidae, of which he was most knowledgeable. We sometimes lunched together in the museum's restaurant or that of the Victoria and Albert Museum or in a local pub called *The Hoop and Toy*. On these occasions Derek talked almost nonstop about birds, particularly their behaviour, and was often so preoccupied that I feared for his life and limb when we crossed such busy thoroughfares as Cromwell Road.

In the early 1950s Derek was living at Virginia Water and occasionally invited me to his home to see the Lanceolated and European Jays and other corvids, Barbary Doves and gamebirds housed in his aviaries. The late Dr K. E. L. (Ken) Simmons was sometimes present and then our conversation usually concentrated on the Great Crested Grebe. A particular memory of Derek's home-cooked lunches was that the dessert invariably consisted of a Lyon's fruit pie beside which nestled two Yeast-vite tablets. Derek had a great fondness for salt and I noticed that he usually sprinkled it liberally on his food. Once when he visited my home, my mother was astonished when he sprinkled salt over slices of bread and jam. In a letter written in 2002, answering a letter in which I had mentioned that I had read that a low salt diet is believed by some experts to lessen the incidence of Ménière's disease, from which Derek had suffered, he scoffed at the idea and said he was continuing to eat salt, as he had done since the age of four, with "bread and butter, ice cream, cakes, bananas, etc., as well as with meat and potatoes, etc." Fortunately in his case, the disease had become less and less severe from the early 1990s and was hardly troubling him, apart from the fear that it might return. When it started it caused 60% hearing loss in his left ear, but had not affected his right ear and at the age of 83 he could still hear the high-pitched contact calls of Goldcrests and Long-tailed Tits. Although in his latter years he suffered from bouts of depression and often slept badly, awaking from nightmares, he obtained much consolation from his continuing interest in birds and, latterly, in butterflies and moths. In June 2002, he wrote, "I am not very well and rather depressed at the moment, but birds and butterflies still please me." He often dealt with his correspondence in the very early hours of the morning and from 2004 I found his handwriting

increasingly difficult to read. In a letter sent in January 2005 he mentioned that his arthritic hands prevented him from typing.

On a visit to Virginia Water on June 1st 1952, I recall spending much of the day watching with him from a hide he had constructed a pair of Jays feeding a single nestling. This was in a wood near his home where we also discovered a pair of Lesser Spotted Woodpeckers feeding well advanced nestlings in a hole low down in an alder adjacent to a stream. A few days later we visited Dartford Marshes in north-west Kent and heard two Quail calling from the wheatfields. We also found two Turtle Dove nests in a hawthorn thicket, one with eggs and the other with two nestlings - an unlikely find on these Thames-side marshes nowadays.

The following weekend we decided to stay overnight on the marshes. As it started to get dark on the Saturday evening, I asked Derek where he thought we should stay for the night? He replied, "Right here" and laid down in the marsh pasture where we had earlier been watching Corn Buntings. I was somewhat taken aback as we had no tent and I had assumed that we would find bed and breakfast accommodation. I laid down beside him and eventually dozed off until sometime after midnight when I awoke feeling cold and covered with a light dew. I woke Derek and suggested that we would find more shelter and warmth in a nearby hawthorn thicket. We found that the drawback there was that it was home to a large number of rats, so took turns to keep them at bay by shining our torches. After a rather restless and chilly night, we finally awoke at 4.00am to a chorus of a hundred or so Linnets that had roosted in the thicket. Soon after we left there we came upon a small stackyard around which six Red-legged Partridges were feeding. We watched them for a time, then climbed onto a half-built haystack to get a better view. The increasing warmth from the rising sun led to us falling asleep after our restless night and when we eventually pulled ourselves together at about 7.00am, the partridges were nowhere to be seen. Later we found a pair accompanied by two chicks. Derek was searching for the chicks in thick vegetation in order to ring (band) them when he disturbed another adult Red-legged Partridge. He then saw that a Stoat had been crouching very close to this bird. Derek took out a Lapwing call-pipe and began blowing frequent shrill blasts on it, which had a startling effect on the Stoat. It was clearly puzzled and fascinated by the sound and run round and round in the vegetation close to us. On one occasion it jumped right beside Derek's feet. After a few minutes, however, it lost interest and rapidly departed.

Derek told the story of a summer visit he made to the former Perry Oaks Sewage Farm near where Heathrow Airport stands today. The surface of the sludge beds had become dry, cracked and solid-looking. Walking along the edge of one of them, Derek came upon a pair of Pied Wagtails, I believe,

and became so intent on obtaining a closer look at some interesting aspect of their behaviour, that he forgot that the surface was not as solid as it looked and impulsively stepped upon it and immediately sank up to his armpits in the sludge. Fortunately other birdwatchers hastened to haul him out, which they managed with a sound, so Derek said, like that of a cork coming out of a champagne bottle but without the same pleasing odour. He managed to remove much of the sewage sludge by rolling about on a grassy bank and returned home via the London Underground with fellow passengers sitting as far away from him as possible.

Another example of his implusiveness can be found in his article about wild Rock Doves published in the *Avicultural Magazine* Vol.87, No.1, pp.19-33 (1981), in which Derek described his searches for nests of this species in the dangerous sea caves of South Uist, where he had permission from the laird to obtain a few squabs for study in captivity. Having managed to secure one on the other side of a chasm in a sea cave, using a landing net at the end of two long sticks lashed together, the lashings suddenly gave way and the young Rock Dove, a female, was thrown into the sea below. Derek instantly jumped into the ice cold water and at some considerable peril to himself succeeded in rescuing it. However, it was the only one he was able to return home with, though soon afterwards he was sent another squab from Shetland which, happily, proved to be a male.

When I first got to know Derek in the late 1940s, I was impressed by his determination to teach himself German so that he could read the books and papers by German-speaking ethologists and ornithologists whose works he admired. In our recent correspondence he often sent me German poems and remarked that he was able to read and hear German without having to translate it in his head.

Derek's first job was in 1937 working for his father, a bespoke tailor, in London. Following wartime service in the Army from 1941-1946, he joined the Bird Room staff of the British Museum (Natural History) in October 1946 and retired in February 1982.

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2009 SUBSCRIPTION

The time has come around again to remind members and other subscribers that the 2009 subscription will become due on January 1st. Those who would prefer to make the payment in US dollars will again be able to send checks or money orders (US\$38 for receiving magazines by regular mail or US\$50 by air mail) to: The Avicultural Society, c/o Jane Cooper, 12650 Hearst Road, Willits, California 95490-9231, USA. All checks and money orders should be made payable to The Avicultural Society.

IN THE PINK

During the 2008 breeding season, some 30 different species bred and raised more than 100 young at the Cotswold Wildlife Park and Gardens, Burford, Oxfordshire. Species bred included the Pink Pigeon *Nesoenas mayeri*, Ross's Turaco *Musophaga rossae*, Citron-crested Cockatoo *Cacatua sulphurea citrinocristata*, Madagascar Teal *Anas bernieri* and Omei Shan *Liocichla Liocichla omeiensis*.

A record six Pink Pigeons were raised, using Barbary Doves as foster parents. The park has been working with the Pink Pigeon since 1997 as part of a European Endangered Species Programme (EEP) run by the Durrell Wildlife Conservation Trust on behalf of the Government of Mauritius. Thanks to the release of captive-bred birds and improved habitat protection the wild population has increased to some 330 or so birds.

As so few collections are succeeding in breeding the Citron-crested Cockatoo, the European Endangered Species Programme (EEP) Co-ordinator recommended that hand-rearing be considered and it proved successful. Keepers succeeded in hand-rearing a chick and left the pair with a second clutch, from which the pair also raised a chick.

The park also succeeded for the first time in breeding the Omei Shan *Liocichla*, a species for which it holds the European studbook.

GOOD NEWS FROM LORO PARQUE

A further three Lear's Macaws *Anodorhynchus leari* have been raised at Loro Parque, two by their parents and one by a pair of Green-winged Macaws *Ara chloropterus*. It brings the total number bred there in 2008 to four. In 2006, Loro Parque Fundación started with two pairs, received from Sao Paulo Zoo, and now has 11 Lear's Macaws.

It has kept the Yellow-tailed Black Cockatoo *Calyptrorhynchus funereus* for many years, but has only just succeeded in hatching its first ever chick. In 2002, it managed to exchange one of its two males for a two-year old female, which having laid infertile eggs in 2006 and 2007, this year sat for 18 days before abandoning the two eggs, which were transferred to an incubator, where one hatched. The chick weighed 19.8g and had intensive yellow down. Curator Dr Matthias Reinschmidt described the chick, which is being hand-reared, as "very lively and active."

Two Pesquet's Parrots *Psittichas fulgidus* were hand-reared and four pairs of Purple-bellied Parrots *Triclaria malachitacea* bred successfully. Greater Vasa Parrots *Coracopsis vasa* also bred successfully, so did the Pileated Parrots *Pionopsitta pileata* and the parque's Red-spectacled Amazons *Amazona pretrei*, after failing to breed last year.



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